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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,287	WILENSKY, GREGG D.	
	Examiner	Art Unit	
	Sherod J. Emerson	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/Mar/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 September 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/Mar/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-59 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate s of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3,8-23, 25,27,29-31, 34-51, 53, 55, 57-59 are rejected under 35 U.S.C. 102(b) as being unpatentable over Barber et al., hereinafter Barber (US Patent 5751286).

4. As to claim 1, Barber discloses, A method for searching a collection of media objects, comprising:

combining information pertaining to a feature common to a plurality of reference objects to produce composite reference information representing criteria for a search (column 2, lines 49-52, 58-63); and

comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects to identify one or more media objects (column 3, lines 55-60);

wherein a non-Euclidian function is used either to combine the information pertaining to the feature, or to compare the composite reference information to information pertaining to the same feature (the function used for combining algorithms are non- Euclidean, column 10, lines 1-6).

5. As to claim 2, Barber discloses, The method of claim 1, further comprising:

receiving user input specifying the plurality of reference objects (a plurality of reference objects used by user is disclosed , column 9, lines 5-24).

6. As to claim 3, Barber discloses, The method of claim 1, further comprising:

selecting a media object in the collection of media objects based upon the comparison of the information pertaining to the feature for each media object and the composite reference information (column 9, lines 40-61).

7. As to claim 8, Barber discloses, The method of claim 1, further comprising:

combining information pertaining to a second feature common to the plurality of reference objects to produce additional composite reference information representing criteria for the search (the ability of the system to add features dynamically by dragging and dropping images onto a "image query construction window" column 5, lines 13-26); and

comparing the additional composite reference information to information pertaining to the

second feature for each respective one of the plurality of media objects in the collection of media objects to identify one or more media objects (the comparison of the additional composite reference information's second feature to various media objects (which contains the second feature), column 5, lines 13-38).

8. As to claim 9, Barber discloses, The method of claim 8, wherein:
the information pertaining to a feature and the information pertaining to a second feature is weighted to specify a relative importance of the features (the disclosure of weights used in determining relative importance in queries using composite images, this feature can be used in all such queries, column 10, lines 15-33).

9. As to claim 10, Barber discloses, receiving user input indicating the relative importance of the feature and the second feature (the disclosure of a user being able to alter weights used in determining relative importance in queries of a particular feature using composite images, this feature can be used in all such queries, column 10, lines 15-33).

10. As to claim 11, Barber discloses, The method of claim 8, wherein:
the feature and the second feature are each represented by a relative frequency of occurrence of a feature value (a method of feature computation is disclosed, giving data on the most frequently occurring colors (but other image characteristics can be used) in the form of a histogram, column 16, lines 15-22).

11. As to claim 12, Barber discloses, The method of claim 8, wherein:
information pertaining to the feature and information pertaining to the second feature includes color information describing the relative frequency of occurrence of colors in an object (a method of feature computation is disclosed, giving data on the most frequently occurring colors in the form of a histogram, column 16, lines 15-22).

12. As to claim 13, Barber discloses, The method of claim 8, wherein:
information pertaining to the feature is mapped to information pertaining to the second feature (a comparison of appended information from a second feature to an original feature is disclosed which in this case is used to determine how the original information (bears) is used in collusion with the appended information (water), column 9, lines 40-61).

13. As to claim 14, Barber discloses, The method of claim 1, further comprising:
combining information pertaining to the feature for an additional reference object with the composite reference information to revise the composite reference information (the ability of the system to add features is dynamically done by dragging and dropping images onto a "image query construction window", editing is allowed to also manipulate previously used images, column 5, lines 13-26, column 10, lines 34-38).

14. As to claim 15, Barber discloses, The method of claim 14, further comprising:
the additional reference is a media object identified by comparing the composite reference information to information pertaining to the feature for each respective one of the plurality of

media objects (the comparing of composite reference information to features of a plurality of media objects is disclosed, column 9, lines 47-61)

15. As to claim 16, Barber discloses, The method of claim 14, further comprising: comparing the revised composite reference information to information for the feature for each of a second plurality of media objects in the collection of media objects (the comparison of a revised composite reference to a plurality of media objects, column 9, lines 47-61, column 10, lines 34-38).

16. As to claim 17, Barber discloses, The method of claim 1, wherein: comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects includes assigning a similarity value (a similarity value is assigned, column 14, lines 44-67) to each respective one of the media objects in the collection of media objects, each similarity value indicating the similarity of the information for the media object and the composite reference information (the correlation of similarity score being between the media composite reference and media objects, column 16, lines 61-67, column 17, lines 1-14)

17. As to claim 18, Barber discloses, The method of claim 17, wherein: each similarity value of each of the media objects in the collection of media objects is less than or equal to a similarity value calculated for each reference object (a measure of similarity being

equal or less than a reference, column 17, lines 5-17).

18. As to claim 19, Barber discloses, The method of claim 17, further comprising:
ranking the media objects according to their similarity values (images are ranked according to their similarity to the query, column 16, lines 65-67, column 17, lines 1-4); and
selecting one or more media objects in the collection of media objects based upon its rank (Images are output according to their rank, which will allow the user to select according to rank , column 17, lines 2-4).

19. As to claim 20, Barber discloses, The method of claim 8, wherein:
for each reference and media object, the information pertaining to the feature and the information pertaining to the second feature is expressed as a feature vector of components (the use of corresponding data representations, which are in vector form, used to represent features is disclosed, column 6, lines 61-67, column 7, lines 13-25).

20. As to claim 21, Barber discloses, The method of claim 20, wherein:
combining information pertaining to a feature and combining information pertaining to a second feature common to a plurality of reference objects includes combining the feature vectors of the plurality of reference objects to produce a composite reference vector (the combination of corresponding data representations by dragging and dropping images onto an image query window is disclosed, which is not limited to only the initial composite image, but is allowed to

be edited via an edit function column 7, lines 13-47, column 10, lines 34-38).

21. As to claim 22, Barber discloses, The method of claim 21, wherein:

each feature vector includes one or more components representing metadata associated with the corresponding reference or media object (each vector is composed of components representing information of which the reference object is composed, columns 6, lines 61-66); and

combining information pertaining to a feature and combining information pertaining to a second feature common to a plurality of reference objects includes combining components representing the feature or the second feature according to a first combination function and combining the one or more components representing metadata associated with each reference object according to a second combination function (the combining of information pertaining a feature and second feature that is common to a plurality of reference objects with a combination function and combining components representing metadata associated with each reference object with a second combination function is disclosed where it is stated specifically that an arithmetic or logical method can be used to combine the images, and thus either method may be used to accomplish the task column 10, lines 1-6).

22. As to claim 23, Barber discloses, The method of claim 21, further comprising:

defining a weighting vector for the feature and the second feature, the weighting vector specifying a relative importance for the corresponding features (the use of a weighting feature is disclosed, which allows a user to specify relative importance, column 10, lines 15-33);

wherein combining the feature vectors includes using the weighting vector to specify a relative

importance of the features (the inclusion of weighing component in the feature vector is disclosed, Fig. 4).

23. As to claim 25, Barber discloses, The method of claim 21, wherein:

comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects to identify one or more media objects (the comparing of composite information made of various reference objects that is compared to the corresponding components of different media to determine similarity, column 2, lines 14-27);

24. As to claim 27, Barber discloses, The method of claim 1, wherein:

combining information pertaining to a feature common to a plurality of reference objects includes using a combination function (image information being combined arithmetically or logically is disclosed, column 10, lines 1-6);

comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects includes using a comparison function that is based upon the combination function (comparison of composite reference information using a comparison function based on the combination function, column 8, lines 37-38).

25. As to claim 29, Barber discloses, A computer program product on a computer-readable medium, for searching a collection of media objects, the computer program comprising instructions operable to cause a programmable processor to:

combine information pertaining to a feature common to a plurality of reference objects to produce composite reference information representing criteria for a search (column 2, lines 49-52, 58-63); and

compare the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects to identify one or more media objects (column 2, lines 55-60);

wherein a non-Euclidian function is used either to combine the information pertaining to the feature, or to compare the composite reference information to information pertaining to the same feature (the function used for combining algorithms are non- Euclidean, column 10, lines 1-6).

26. As to claim 30, Barber discloses, The computer program product of claim 29, further comprising instructions operable to cause a programmable processor to:

receive user input specifying the plurality of reference objects (a plurality of reference objects used by user is disclosed , column 9, lines 5-24)).

27. As to claim 31, Barber discloses, The computer program product of claim 29, further comprising instructions operable to cause a programmable processor to:

select a media object in the collection of media objects based upon the comparison of the information pertaining to the feature for each media object and the composite reference

information (Images are output according to their rank, which will allow the user to select according to rank , column 17, lines 2-4).

28. As to claim 34, Barber discloses, The computer program product of claim 29, wherein: instructions to combine information pertaining to a feature common to a plurality of reference objects to produce composite reference information include instructions to determine the intersection of the information for the reference objects (the determination of an histogramtic intersection is discussed in prior art, column 2, lines 10-13).

29. As to claim 35, Barber discloses, The computer program product of claim 29, wherein: instructions to combine object information pertaining to a feature common to a plurality of reference objects to produce composite reference information include instructions to determine the union of the information for the reference objects (the combination of information that is common to various reference objects to produce a composite reference object which has information characteristics which are an union of all objects, column 6, lines 61-67, column 7, lines 1-47, Fig. 4).

30. As to claim 36, Barber discloses, The computer program product of claim 29, further comprising:

instructions to combine information pertaining to a second feature common to the plurality of reference objects to produce additional composite reference information representing criteria for the search (the ability of the system to add features is dynamically by dragging and dropping

images onto a "image query construction window" column 5, lines 13-26); and

instructions to compare the additional composite reference information to information pertaining to the second feature for each respective one of the plurality of media objects in the collection of media objects to identify one or more media objects (the comparison of the additional composite reference information's second feature to various media objects, column 5, lines 13-38).

31. As to claim 37, Barber discloses, The computer program product of claim 36, wherein: the information pertaining to a feature and the information pertaining to a second feature is weighted to specify a relative importance of the features (the disclosure of weights used in determining relative importance in queries using composite images, this feature can be used in all such queries, column 9, lines 5-67)..

32. As to claim 38, Barber discloses, The computer program product of claim 36, further comprising instructions operable to cause a programmable processor to:

receive user input indicating the relative importance of the feature and the second feature (the disclosure of a user being able to alter weights used in determining relative importance in queries of a particular feature using composite images, this feature can be used in all such queries, column 9, lines 5-67).

33. As to claim 39, Barber discloses, The computer program product of claim 36, wherein: the feature and the second feature are each represented by a relative frequency of occurrence of a feature value (a method of feature computation is disclosed, giving data on the most frequently

occurring colors (but other image characteristics can be used) in the form of a histogram, column 16, lines 15-22).

34. As to claim 40, Barber discloses, The computer program product of claim 36, wherein: information pertaining to the feature and information pertaining to the second feature includes color information describing the relative frequency of occurrence of colors in an object (a method of feature computation is disclosed, giving data on the most frequently occurring colors in the form of a histogram, column 16, lines 15-22).

35. As to claim 41, Barber discloses, The computer program product of claim 36, wherein: information pertaining to the feature is mapped to information pertaining to the second feature (a comparison of appended information from a second feature to an original feature is disclosed which in this case is used to determine how the original information (bears) is used in collusion with the appended information (water), column 9, lines 40-61).

36. As to claim 42, Barber discloses, The computer program product of claim 29, further comprising instructions operable to cause a programmable processor to:
combine information pertaining to the feature for an additional reference object with the composite reference information to revise the composite reference information (the ability of the system to add features is dynamically by dragging and dropping images onto a "image query construction window" column 5, lines 13-26).

37. As to claim 43, Barber discloses, The computer program product of claim 42, wherein: the additional reference is a media object identified by comparing the composite reference information to information pertaining to the feature for each respective one of the plurality of media objects (The location of additional media to append to composite information is inherent in the invention as results of queries are selectable and can then be be used to edit the composite reference, and then re-queried via the edit function and drag and drop capabilities, column 5, lines 13-26, column 10, lines 34-38).

38. As to claim 44, Barber discloses, The computer program product of claim 42, further comprising instructions operable to cause a programmable processor to:
compare the revised composite reference information to information for the feature for each of a second plurality of media objects in the collection of media objects (the comparison of a revised composite reference to a plurality of media objects, column 9, lines 47-61, column 10, lines 34-38).

39. As to claim 45, Barber discloses, The computer program product of claim 29, wherein: instructions to compare the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects include instructions to assign a similarity value to each respective one of the media objects in the collection of media objects, each similarity value indicating the similarity of the information for the media object and the composite reference information(the correlation of

similarity score being between the media composite reference and media objects, column 16, lines 61-67, column 17, lines 1-14) .

40. As to claim 46, Barber discloses, The computer program product of claim 45, wherein: each similarity value of each of the media objects in the collection of media objects is less than or equal to a similarity value calculated for each reference object (a measure of similarity being equal or less than a reference, column 17, lines 5-17).

41. As to claim 47, Barber discloses, The computer program product of claim 45, further comprising instructions operable to cause a programmable processor to:
rank the media objects according to their similarity values (images are ranked according to their similarity to the query, column 16, lines 65-67, column 17, lines 1-4); and
select one or more media objects in the collection of media objects based upon its rank (Images are output according to their rank, which will allow the user to select according to rank , column 17, lines 2-4).

42. As to claim 48, Barber discloses, The computer program product claim 36, wherein:
for each reference and media object, the information pertaining to the feature and the information pertaining to the second feature is expressed as a feature vector of components.

43. As to claim 49, Barber discloses, The computer program product of claim 48, wherein: instructions to combine information pertaining to a feature and combine information pertaining

to a second feature common to a plurality of reference objects includes instructions to combine the feature vectors of the plurality of reference objects to produce a composite reference vector (the combination of corresponding data representations by dragging and dropping images onto an image query window is disclosed, which is not limited to only the initial composite image, but is allowed to be edited via an edit function column 7, lines 13-47, column 10, lines 34-38).

44. As to claim 50, Barber discloses, The computer program product of claim 49, wherein: each feature vector includes one or more components representing metadata associated with the corresponding reference or media object (each vector is composed of components representing information of which the reference object is composed, columns 6, lines 61-66); and combining information pertaining to a feature and combining information pertaining to a second feature common to a plurality of reference objects includes combining components representing the feature or the second feature according to a first combination function and combining the one or more components representing metadata associated with each reference object according to a second combination function. (the combining of information pertaining a feature and second feature that is common to a plurality of reference objects with a combination function and combining components representing metadata associated with each reference object with a second combination function is disclosed where it is stated specifically that an arithmetic or logical method can be used to combine the images, and thus either method may be used to accomplish the task column 10, lines 1-6).

45. As to claim 51, Barber discloses, The computer program product of claim 49, further comprising instructions operable to cause a programmable processor to:
define a weighting vector for the feature and the second feature, the weighting vector specifying a relative importance for the corresponding features (a weighting method is disclosed which pertains to all features as stated by the art, which uses a vector form as a data representation, at to display the form of features, column 6, lines 61-66 column 10, lines 24-33,);
wherein instructions to combine the feature vectors include instructions to use the weighting vector to specify a relative importance of the features.

46. As to claim 53, Barber discloses, The computer program product of claim 49, wherein:
instructions to compare the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a collection of media objects include instructions to compare the composite reference vector to a feature vector of each of the plurality of media objects in the collection of media objects (the comparing of composite information made of various reference objects that is compared to the corresponding components of different media to determine similarity, column 2, lines 14-27);

47. As to claim 55, Barber discloses, The computer program product of claim 29, wherein:
instructions to combine information pertaining to a feature common to a plurality of reference objects include instructions to use a combination function (the use of a combination function is disclosed which acts on a plurality of reference objects, column10, lines 1-15);
instructions to compare the composite reference information to information pertaining to the

same feature for each respective one of a plurality of media objects in a collection of media objects include instructions to use a comparison function that is based on the combination function (the use of a comparison function that is based on the combination function is disclosed, column 7, lines 56-67, column 8, lines 1-55).

48. As to claim 57, Barber discloses, A system for searching a collection of media objects, comprising:

means for combining information pertaining to a feature common to a plurality of reference objects to produce composite reference information representing criteria for a search (column 2, lines 49-52, 58-63);

means for comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in a. collection of media objects to identify one or more media objects (column 2, lines 55-60);

wherein a non-Euclidian function is used either to combine the information pertaining to the feature, or to compare the composite reference information to information pertaining to the same feature (the function used for combining algorithms are non- Euclidean, column 10, lines 1-6).

49. As to claim 58, Barber discloses, means for comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of media objects in the collection of media objects includes means for assigning a similarity value(a ranking of similarity of queried images is disclosed, column 8, lines 46-55) to each respective one of the media objects in the collection of media objects, each similarity value indicating the

similarity of the information for the media object and the composite reference information, wherein the similarity value of each of the media objects in the collection of media objects is less than or equal to a similarity value calculated for each
reference object (the representation of similarity as a score calculated as a closer match for better scores, column 14, lines 44-67).

50. As to claim 59, Barber discloses, A system for searching a collection of media objects, comprising:
means for combining information pertaining to two or more features common to a plurality of reference objects to produce composite reference information representing criteria for a search (column 2, lines 49-52, 58-63), wherein the information is expressed as a feature vector (the use of corresponding data representations, which are in vector form, used to represent features is disclosed, column 6, lines 61-67, column 7, lines 13-47) of components and means for combining includes means for combining the feature vectors (the combination of corresponding data representations by dragging and dropping images onto an image query window is disclosed column 7, lines 13-47) of the plurality of reference objects to produce a composite reference vector; and
means for comparing the composite reference information to information pertaining to the same two or more features for each respective one of a plurality of media objects in a collection of media objects (a method of comparing the composite reference information to images in a database, column 7, lines 48-65), wherein the means for comparing includes means for comparing the composite reference vector to the feature vectors of each of the media objects in

the collection of media objects (the comparing of composite information made of various reference objects that is compared to the corresponding components of different media to determine similarity, column 2, lines 14-27).

Claim Rejections - 35 USC § 103

51. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

52. Claims 4-7, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barber in view of Jain et al, hereinafter Jain (US Patent 5911139).

53. As to claim 4, Barber does not disclose, The method of claim 1, wherein:
the plurality of reference objects includes one or more objects having a type selected from: audio, image, text, CD, or video.

54. Jain, however, discloses such different types of media used in the invention (column 13, lines 47-52).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Jain as both arts teach on the same inventive concept and it would have been advantageous to incorporate more than one type of media into the query search so as to allow more than one type of media to be found in a database using the disclosed methods as evidenced by, Fig. 5, drawing 99, referenced in Barber.

55. As to claim 5, Barber does not disclose, The method of claim 4, wherein: combining information pertaining to a feature common to a plurality of reference objects includes combining information for different types of objects.

56. However, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate more than one type of media into the query search so as to allow more than one type of media to be found in a database using the disclosed methods as evidenced by, Fig. 5, item 99, referenced in Barber.

57. As to claim 6, Barber does not disclose, The method of claim 1, wherein: combining information pertaining to a feature common to a plurality of reference objects to produce composite reference information includes determining the intersection of the information for the reference objects

58. Jain, however, discloses the determination of an histogramatic intersection (column 23, lines 52-55).

59. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Jain in order to facilitate a diversified method to combine feature vectors for comparison purposes.

60. As to claim 7, Barber does not disclose, The method of claim 1, wherein:
combining information pertaining to a feature common to a plurality of reference objects to produce composite reference information includes determining the union of the information for the reference objects.

61. Jain, however, discloses a discussion of histogramatic methods, which includes unions, to compare feature vectors (column 23, lines 53-55).

62. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Jain in order to facilitate a diversified method to combine feature vectors for comparison purposes.

63. As to claim 32, Barber discloses, The computer program product of claim 29, wherein: the plurality of reference objects includes one or more objects having a type selected from: audio, image, text, CD, or video.

64. Jain, however, discloses, a selection of various media types to select from (column 13, lines 33-38).

65. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Jain as both arts teach on the same inventive concept and it would have been advantageous to incorporate more than one type of media into the query search so as to allow more than one type of media to be found in a database using the disclosed methods as evidenced by, Fig. 5, drawing 99, referenced in Barber).

66. As to claim 33, Barber does not disclose, The computer program product of claim 32, wherein:
instructions to combine information pertaining to a feature common to a plurality of reference objects include instructions to combine information for different types of objects.

67. Jain, however, discloses, an algorithm for combining references is disclosed (column, lines).

68. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Jain as both arts teach on the same inventive concept and it would have been advantageous to incorporate more than one type of media into the query search so as to allow more than one type of media to be found in a database using the disclosed methods as evidenced by, Fig. 5, drawing 99, referenced in Barber.

69. Claims 24, 26,28, 52, 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barber in view of Berman et al, hereinafter Berman (US PG Pub 2002/0002550).

70. As to claim 24, Barber does not disclose, The method of claim 21, wherein: combining the feature vectors includes using a Min or Max function.

71. Berman, however, discloses a Min and Max function used to combine feature vectors for comparison ([102], [0104]).

72. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Berber in order to more efficiently process queries involving feature vectors.

73. As to claim 26, Barber does not disclose, The method of claim 25, wherein:
comparing the composite reference vector to the feature vectors of each of a plurality of media objects includes using a Min or Max function.

74. Berman, however discloses the comparison of feature vectors using Min and Max functions ([002], [0104]).

75. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Berber in order to more efficiently process queries involving feature vectors.

76. As to claim 28, Barber does disclose, A method for searching a collection of media objects, comprising:
combining information pertaining to two or more features common to a plurality of reference objects to produce composite reference information representing criteria for a search, wherein the information is expressed as a feature vector of components (creation of a composite object is discussed with features (shape, color, texture, etc.) included column 10, lines 6-14, column 9, lines 5-24)

77. Barber, does not, however, disclose,
combining includes combining the feature vectors of the plurality of reference objects using a Min or Max function to produce a composite reference vector; and

comparing the composite reference information to information pertaining to the same feature for each respective one of a plurality of the media objects in the collection of media objects, wherein comparing includes comparing the composite reference vector to the feature vectors of each media object in the collection of media objects using a Min or Max function and assigning a similarity value to each media object in the collection of media objects, the similarity value indicating the similarity of the feature vector of the media object to the composite reference vector, where the similarity value of each of the media objects in the collection of media objects is less than or equal to a similarity value calculated for each reference object.

78. However, Berman discloses a combination of feature vectors using a Min or Max function to create a composite vector, which is an intersection or union of the former vectors([0102], [0104]). Comparison of vectors to a database using a Min or Max function and assigning a similarity value via distance measures ([0030]-[0039])

79. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Berman as to more efficiently search a database using the Min and Max functions.

80. As to claim 52, Barber does not disclose, The computer program product of claim 49, wherein:

instructions to combine the feature vectors include instructions to use a Min or Max function

81. However, Berman discloses the combination of feature vectors using a Min or Max function ([0104])

82. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Berman as to more efficiently search a database using the Min and Max functions.

83. As to claim 54, Barber does not disclose, The computer program product of claim 53, wherein:

instructions to compare the composite reference vector of the reference object to the feature vectors of each of a plurality of media objects include instructions to use a Min or Max function

84. However, Berman discloses the comparison of feature vectors using Min or Max functions ([102], [104])

85. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Berman as to more efficiently search a database using the Min and Max functions.

86. As to claim 56, Barber does not disclose, A computer program product on a computer-readable medium, for

searching a collection of media objects, the computer program comprising instructions operable

to cause a programmable processor to:

combine information pertaining to two or more features common to a plurality of reference objects to produce composite reference information representing criteria for a search, wherein the information is expressed as a feature vector of components (creation of a composite object is discussed with features (shape, color, texture, etc.) included column 10, lines 6-14, column 9, lines 5-67)

87. Barber, does not, however, disclose,

the instructions to combine include instructions to combine the feature vectors of the plurality of reference objects using a Min or Max function to produce a composite reference vector; and compare the composite reference information to information pertaining to the same feature for each respective one of a plurality of the media objects in the collection of media objects includes comparing the composite reference vector to the feature vectors of each media object in the collection of media objects using a Min or Max function and assigning a similarity value to each media object in the collection of media objects, the similarity value indicating the similarity of the feature vector of the media object to the composite reference vector, where the similarity value of each of the media objects in the collection of media objects is less than or equal to a similarity value calculated for each reference object.

88. However, Berman discloses a combination of feature vectors using a Min or Max function to create a composite vector, which is an intersection or union of the former vectors

([0102], [0104]). Comparison of vectors to a database using a Min or Max function and assigning a similarity value via distance measures ([0030-0039])

89. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Barber with the teachings of Berman as to more efficiently search a database using the Min and Max functions.

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherod J. Emerson whose telephone number is 5712701914. The examiner can normally be reached on 8:00AM - 5:00PM Alternate Fridays off.

2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nabil El-Hady can be reached on 5212723963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. This Office action has an attached requirement for information under 37 CFR 1.105. A complete reply to this Office action must include a complete reply to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

SJE

3/16/2007

NABIL M. EL-HADY
SUPERVISORY PATENT EXAMINER